

What is claimed as new is as follows:

1. A motor vehicle illumination device comprising:
  - a least a first assembly and at least a second component;
- A) said first assembly including:
  - a) at least one inserted injection plastic or acrylic molded component;
    - i) said plastic or acrylic to be optically clear, optically opaque or color tinted;
    - b) said inserted injection plastic or acrylic component containing at least one inserted multiple light emitting diode mounting board with multiple light emitting diodes, or LEDs, mounted on at least a first side;
      - i) said light emitting diodes to be at least a first color and or a second color;
      - ii) said first color to be amber and said second color to be red;
      - iii) said light emitting diode mounting board positioned within the insertion injected component to direct illumination from said light emitting diodes toward a first side surface of said insertion injected component;
      - iv) said light emitting diode mounting board to have an illumination reflective surface on at least a first side;
    - c) electrical connectivity for said multiple light emitting diodes is installed beneath said illumination reflective surface on said LED mounting board;
    - d) said inserted plastic injected component having illumination diffusing means on at least a first side;
      - i) said illumination diffusing means to include at least multiple approximate end to end, or top to bottom, "V" shaped indentations, or any other shaped surface distortions intended to diffuse illumination, or chemical, gas, or mechanical frosting of at least said a first side;
  - B) said second component comprised of at least a first injection molded UV resistant polycarbonate cover for said first component;
    - a) said polycarbonate cover formed with a first side to fit against the complete said first side surface illumination diffusion means of said first assembly component;

- i) said polycarbonate cover second side formed to fit into an opening in the outside surface of a motor vehicle and to conform to the outside surface contour of said motor vehicle side or other panel;
  - ii) said polycarbonate cover second side may be optically clear, opaque, or frosty;
- b) said first insertion injected plastic or acrylic assembly component may be fastened to said second component polycarbonate cover by means including but not limited to ultrasonic welding, where the illumination diffusion means of said first component first side, joins the illumination diffusion means of said second component first side;
- c) said second component polycarbonate cover may remain a tight fit to said first component and be secured in place against said first component by snap-fit retention, mechanical fasteners, or other fastening means;
- d) said ultrasonic welding together of said first assembly and said second component form a first embodiment of said motor vehicle illumination device intended to be mounted between an inner and outer panel of a double paneled motor vehicle, or mounted inside of a single panel vehicle;
- e) said vehicle outer panel to have an elongated opening that the outer said second side of said polycarbonate cover fits into from the inside, but not through.

2. The motor vehicle illumination device according to claim 1, where said at least a second component includes a third component;

- a) said third component is an injection molded UV resistant polycarbonate cover with a first side clear surface that matches in size and shape the second side of said first insertion injection molded component of claim 1;
- i) said polycarbonate cover may be optically clear, opaque, or colored;
- b) said first side clear surface of said third component may be secured by ultrasonic welding or any other means to said second side surface of said first insertion injection molded component of claim 1;

- c) said third component polycarbonate cover may remain a tight fit against said second side of said first insertion injection molded component of claim 1, secured in place by snap fit retention, mechanical fasteners, or any other means;
- d) said second side of said third component is reduced in size from said first side of said third component to fit into but not through an opening in a vehicle inner wall, such as the inner wall of a pick up truck or other truck body;
- e) said combination of components described in claim 1 and claim 2 form a second embodiment of this instant invention;
  - i) said combination of components may be accomplished by a co-extrusion process whereby said two or more extruded components are joined as they are formed;
  - f) said second embodiment may be mounted between a vehicle double side panel or behind a vehicle single side panel;
    - i) said single side panel mount requires one or more mounting brackets to secure said second embodiment in place;
    - ii) said one or more brackets require an opening through which illumination from said second embodiment is visible;
  - g) said inserted multiple light emitting diode mounting board of claim 1 to be illumination reflective on a first and on a second side;
    - i) said light emitting diode mounting board to have light emitting diodes mounted on a first and on a second side of said board;
    - ii) said light emitting diodes on said second side of said board to face away from said board to direct illumination toward and through said third component;
    - iii) said light emitting diodes on said second side of said mounting board to be at least a first color;
    - iv) said first color is white.
- 3. The motor vehicle illumination device according to claim 1, where said insertion plastic injection molded component contains a first and a second multiple light emitting diode mounting boards;
  - a) said first LED mounting board is positioned in said inserted plastic injection mold near the top, with said LEDs facing downward, and said second LED

mounting board is positioned in said injection mold near the bottom with said LEDs facing up;

- i) said LED mounting boards are optically reflective on the LED mounting side;
- b) additional individual or cluster LEDs are inserted into said injection mold positioned to direct illumination from at least a first end of said insertion injected molded component toward a second end;
- c) a double sided optically reflective means is positioned diagonally in said mold, substantially from a first end of said mold to a second end of said mold, so that illumination from the downward directed LEDs of said first mounting board is reflected out of said second side of said insertion injected component, and illumination directed upward from said second LED mounting board is reflected out of said first side of said insertion injected component.

4. Said optically clear UV resistant polycarbonate cover of claim 2 may have an extended lip or edge for snap-fit retention, or other anchoring means, for one or more removable colored lenses.